

Patent Appln. No. 09/847,127
Am ndmt. Dated January 9, 2004

PATENT

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-14 and 19 (Previously Cancelled).

Claims 15-18 and 20-23 (Cancelled).

24. (New) A method for improving the efficiency of a process which comprises a process stream at least a portion of which is capable of forming a gaseous hydrogen-containing enrichment stream, and a dilute gaseous waste material stream not capable of self-sustaining combustion and at least a portion of which is converted to carbon dioxide and water vapor by burning using a flare apparatus, said method comprising the steps of:

- a) forming a gaseous hydrogen-containing enrichment stream derived from at least a portion of the process stream;
- b) blending the gaseous hydrogen-containing enrichment stream with the dilute gaseous waste material stream to form a blended flare feed stream;
- c) feeding the blended flare feed stream to the flare apparatus; and
- d) burning the blended flare feed stream using the flare apparatus to convert at least 80% of the dilute gaseous waste material stream to carbon dioxide and water.

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25. (New) The method according to Claim 24, wherein the gaseous hydrogen-containing enrichment stream comprises at least 4 mol% hydrogen, based upon the total moles of the gaseous hydrogen-containing enrichment stream.

26. (New) The method according to Claim 24, wherein the blended flare feed stream comprises at least 3 mol% hydrogen, based on the total moles of the blended flare feed stream.

27. (New) The method according to Claim 24, wherein the blended flare feed stream is capable of self-sustaining combustion in the flare apparatus.

28. (New) The process according to Claim 24, wherein the gaseous hydrogen-containing enrichment stream comprises hydrogen derived from ammonia dissociation.

29. (New) The process according to Claim 24, wherein the gaseous hydrogen-containing enrichment stream comprises hydrogen derived from synthesis gas.

30. (New) The process according to Claim 24, wherein the gaseous hydrogen-containing enrichment stream comprises hydrogen derived from acetylene tail gas.

31. (New) The process according to Claim 24, wherein the gaseous hydrogen-containing enrichment stream comprises hydrogen derived from hydrogen absorber off-gas.

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32. (New) The process according to Claim 24, wherein said blending step comprises blending the dilute gaseous waste material stream with the gaseous hydrogen-containing enrichment stream and a gaseous hydrocarbon-containing enrichment fuel stream.

33. (New) The process according to Claim 24, wherein the process comprises a plurality of processes, each of which is capable of producing at least one product and of operating independently of other chemical processes.